Cal/Ecotox
Toxicity Data for Sea Otter (Enhydra lutris)*

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CRUDE OILS	multiple	TOX-Non-Repro-Sublethal - whole animal		review	a	1
DDD (4,4'-); DDE (4,4'-); DDT (4,4'-)	mean liver DDTs residues in otters where disease was cause of death = 2000 (range = 290-4700 ng/g wet wt) compared to those that died of trauma = 1400 (range = 280 - 3800 ng/g wet wt)	TOX-MORT - mortality in the field	otters that died from infectious diseases contained higher liver DDTs concentrations that those that died of trauma	increase	b	2
TIN, BUTYL	mean liver butyltin residue levels in otters where disease was cause of death = 1570 (range = 40-5300 ng/g wet wt) compared to those that died of trauma = 220 (range = 92-480 ng/g wet wt)	TOX-MORT - mortality in the field	otters that died of infectious disease contained butyltin liver concentrations greater than those that died of trauma	increase	c	3

Notes

a NR; NR; Species - California (R)=Enhydra lutris; TOX - Chemical=CRUDE OILS; N=NR; Tox Exp Tech=NR; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

b Adult; CA; B; Species - California (R)=Enhydra lutris (ssp. nereis); TOX - Chemical=72-54-8; TOX - Chemical=72-55-9; TOX - Chemical=50-29-3; N=4-8; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=4 yrs; Tox Stat Sig=Y; otters found dead along the coast were autopsied; DDTs = p,p'-DDE, p,p'-DDD and p,p'-DDT; see citation for lipid normalized residue data

c Adult; CA; B; Species - California (R)=Enhydra lutris (ssp. nereis); TOX - Chemical=TIN, BUTYL; N=8-14 animals; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=4 yrs; Tox Stat Sig=Y; otters found dead along the coast were autopsied, butyltins = sum of mono-, di- and tri-butyltin.

References

1 Geraci, Joseph R. and Thomas D. Williams. 1990. Physiologic and toxic effects on sea otters, Ch. 8. In: Geraci, Joseph R. and David J. St. Aubin, eds. Sea Mammals and Oil: Confronting the Risks. New York, NY: Academic Press, Inc. p 211-221.

2 Nakata, H., K. Kannan, L. Jing, N. Thomas, S. Tanabe and J.P. Giesy. 1998. Accumulation pattern of organochlorine pesticides and polychlorinated biphenyls in southern sea otters (Enhydra lutris nereis) found stranded along coastal California, USA. Environ. Pollut. Ser. A. 103:45-53.

3 Kannan, Kurunthachalam, Keerthi S. Guruge, Nancy J. Thomas, Shinsuke Tanabe and John P. Giesy. 1998. Butyltin residues in southern sea otters (Enhydra lutris nereis) found dead along California coastal waters. Environ. Sci. Technol. 32:1169-1175.